

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1-16 are pending in this application. Claims 5-10 stand withdrawn from consideration. Claims 15 and 16 are allowed. Claims 1 and 11 were rejected under 35 U.S.C. § 102(b) as anticipated by JP 01197296 A to Yoshikawa. Claims 3, 4, 13, and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over Yoshikawa in view of U.S. patent 1,195,505 to Saino. Claims 2 and 12 were objected to as dependent upon a rejected base claim, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claims and any intervening claims.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter.

Addressing now the rejection of claims 1 and 11 under 35 U.S.C. § 102(b) as anticipated by Yoshikawa, and the further rejection of claims 3, 4, 13, and 14 under 35 U.S.C. § 103(a) as unpatentable over Yoshikawa in view of Saino, those rejections are traversed by the present response.

Each of independent claims 1 and 11 is amended by the present response to clarify features recited therein. Specifically, independent claim 1 now more particularly refers to first and second fasteners and recites:

wherein at least a part of said second fasteners is configured to lose the force of constraint against said surface board or said reinforcing member on higher temperature conditions during a fire prior to said first fasteners losing the force of constraint.

Independent claim 11 is amended to recite similar features.

According to such features clarified in the claims, first and second fasteners are utilized to secure two portions of an elevator door. In the claimed invention one of the fasteners loses a force of constraint against the surface board or reinforcing member on high temperature conditions during a fire prior to the other fasteners losing their force of

constraint. As only a non-limiting example discussed in the present specification, the second fasteners can be formed of aluminum rivets having a lower melting point or lower shearing strength than first fasteners of steel rivets.¹ With such a structure in the claimed invention, certain of the fasteners (e.g., the second aluminum fasteners) will break prior to other of the fasteners (e.g., the first steel fasteners), to decrease a constraint on a surface board and on a reinforcing member by a back board, and thereby it becomes possible to prevent a whole door panel from being deformed.²

The claimed features are believed to clearly distinguish over the applied art to Yoshikawa. In fact, Yoshikawa discloses an opposite structure as that in the claimed invention.

First, applicants note the structure in Yoshikawa is discussed in the present specification at page 3, lines 1-18. One feature in the present invention is to overcome drawbacks in a device such as in Yoshikawa.

Yoshikawa is more particularly directed to a device to absorb a differential thermal expansion due to a temperature difference between a front plate of an elevator door exposed to a fire and a back plate of the elevator door. Yoshikawa achieves that objective by utilizing a combination of fasteners 15 and elongated holes 10a that allow relative sliding between the surface board 8 and the back board 10 in vertical directions, but restrict relative sliding in a lateral direction. Yoshikawa allows such sliding within the elongated holes 10a to absorb a deformation in the door.

The claimed invention takes a different approach than that in Yoshikawa. More particularly, in the claimed invention one type of fastener will lose its force of constraint against a surface board or a reinforcing member prior to another fastener losing its force of constraint. Yoshikawa does not teach or suggest such a structure.

¹ See for example the present specification at page 7, lines 21-34.

² See for example the present specification at page 8, lines 16-27.

The claims now more clearly recite two different types of fasteners utilized to connect the back board to the surface board or reinforcing member. Yoshikawa does not even teach or suggest that structure as in Yoshikawa all of the fasteners 15 appear to be the same type of fastener. In Yoshikawa none of the fasteners 15 is configured to lose a force of constraint prior to other fasteners in high temperature conditions during a fire.

One basis for the outstanding rejection noted in the Office Action is:

The examiner would like to point out that all metals are capable of melting at certain high temperatures. Therefore, the metal fasteners connecting the panel 10 to the panel 8 and reinforcing members 9 will melt at a certain temperature thereby losing force of constraint against the boards.³

In response to that basis for the outstanding rejection, applicants believe the claim amendments clarify that in the claimed features one type of fastener is specifically configured to lose such a force of constraint prior to other fasteners. No metal fasteners in Yoshikawa are configured in that manner as Yoshikawa discloses utilizing the same type of metal fasteners 15 throughout the device.

In such ways, applicants respectfully submit independent claims 1 and 11, and the claims dependent therefrom, patentably distinguish over Yoshikawa.

Moreover, no teachings in Saino are believed to overcome the above-noted deficiencies in Yoshikawa.


In view of the above-noted comments, applicants respectfully submit each of independent claims 1 and 11, and the claims dependent therefrom, are also allowable.

³ Office Action of December 17, 2004, page 3, lines 6-9.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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